OBSERVATIONS

ON THE

MEDICINAL PROPERTIES

OF THE

CANNABIS SATIVA OF INDIA.

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LOOKING at disease abstractedly, I should say that no indications exceed in importance the two following, viz.:—

- 1. The alleviation of acute pain, whether neuralgic, spasmodic, or inflammatory, in its origin; and
- 2. The securing adequate daily rest in sleep by procuring, artificially if necessary, a suspension at least of any morbid actions or conditions that might militate against refreshing repose. Almost all the suffering, and great part of the danger, of sickness may be referred to uneasy sensations of one sort or other, the irritated nervous tissues re-acting throughout the economy on the nutrient functions,

deranging the elementary affinities in the blood, undermining the organic powers, and ultimately ruining the general health. Looking again at disease as we see it in clinical practice, there are no medicinal substances of more interest or importance in its treatment than such as are fitted to fulfil these two indications. In the records of medicine there are few results of professional research more striking than the beneficial effects obtained from opium in various diseases.

Satisfactory effects have also been obtained from other agents in our pharmacopœia, of the narcotic class, especially henbane, camphor, prussic acid, belladonna, aconite, &c., in allaying neuralgic pain, or checking spasm, or procuring sleep. But of all our direct anodynes, antispasmodics and hypnotics, opium is undoubtedly that one popularly known in England as the principal, the most powerful, the most certain, and in a word as fairly worth at least all the rest.

But the use of opium has many inconveniences that limit its application very much, so that in cases standing greatly in need of that ease and repose which, under favourable circumstances, opium is so well calculated to yield, we are not unfrequently prevented from employing it. Its tendency is to produce torpor in the stomach and bowels, and to stop the digestive process and the peristaltic actions; and thus to cause anorexia, constipation and active indigestion; it deranges the hepatic and renal secretions as well as those of the mucous linings of the

whole alimentary canal; it tends strongly to produce headache, vertigo and general discomfort after the cessation of its soporific effects; and these and other inconveniences are of frequent occurrence, and in many cases extremely difficult to obviate in any other way than by abandoning the medicine altogether.

The vast importance of quietude and sleep as restoratives in all grave diseases, whether acute or chronic; the frequent intolerance of opium in individual cases, especially in nervous females, and dyspeptic subjects of either sex; and the inexpediency of its use in a variety of circumstances where repose the most complete is desirable,—these considerations warrant the assertion, that the addition to our materia medica, of any remedy possessing to any considerable extent the virtues without the defects of opium, would be an advantage not easily overrated. Now such an agent I suspect we possess in the Extract. Cannabis Indicæ. This agent seems, like opium, to have been known to the Orientals, and to have been in use as an article of voluptuous excitement amongst the Hindoos for a long series of ages. It was first scientifically tested, so far as I know, by Dr. O'Shaughnessy, of the Medical College, Calcutta; that gentleman was also the first, I believe, to lay the results of accurate observation before the public. The churrus (or resinous extract of the gunjah or dried Indian hemp) was found by Dr. O'Shaughnessy to possess very striking powers as an antispasmodic, as a nervine stimulant, and as an anodyne and hypnotic, and in some respects to excel opium in virtue, especially as an antispasmodic in tetanus, &c. He also observed that it was wholly, or for the most part, free from the deranging action on the stomach and bowels that so limits the utility of opium. Mr. Ley has, I believe the first in this country, published several interesting facts confirmatory of the results of Dr. O'Shaughnessy's experiments and observations; and other gentlemen, possessed of the requisite opportunities, are very probably engaged in clinical investigation of the subject. My attention was called to it only within the last three months, during which I have taken advantage of numerous opportunities of testing the new remedy. The following cases are, I think, favourable, and yet fair, samples of my experience with it.

CASE I.

The first subject nearly on which I made trial of the new remedy was a medical man of forty-four; he has taken it on several occasions: on the first he had no other object than testing its physiological effects, and observing, as far as he could, its mode of operation. At bed-time, being in good health, he took 12 minims of Squire's tincture of Indian hemp, which are equivalent to 1 grain of the extract. In a few minutes he perceived that slight sense of confusion and fullness in the head, with some extra activity in the action of the carotid arteries, which diffusible narcotic stimuli usually produce; and in

half an hour or thereabout fell into a slumber which lasted, uninterruptedly, for about six hours. In the morning he observed none of the inconveniences which opium usually produces with him, no unpleasant taste nor dryness of the mouth; no want of usual appetite; no derangement of bowels. Now, as this gentleman rarely sleeps more than three or four hours consecutively, except after much bodily exertion during the previous day, which he had not had on this occasion; and as opium, in most circumstances not involving acute pain, produces in him quiet sleeplessness and not sleep; and is next day followed by various inconveniences of acute indigestion,—this experiment may be considered successful.

The same individual took 20 minims of the same tincture on another occasion, to secure sleep under the following circumstances:—Being frequently incommoded by rheumatic irritation in the head, producing frightful dreams, troublesome nightmare, megrims, headaches, &c., he took 20 minims of the tincture of hemp, with 3\(\frac{1}{2}\)s. spir. ammon. arom. at bed time, and with effects similar in kind to those experienced on the former occasion. He has since taken 3\(\frac{1}{2}\)s. of the tincture, with ammonia, for a similar head affection, and with very satisfactory effect.

CASE II.

A patient of forty-four, admitted into the St. Marylebone Infirmary, in August 1842, for ovarian dropsy, suffered much from abdominal pains about the seat of the tumour principally, but also over the greater part of the same side of the abdomen. The pains seemed to be neuralgic, and referrible in part, at least, to pressure by the tumour on the neighbouring organs. She had been tapped many times since admission, to the amount of 12 or 15 pints each time of syrup-like fluid. It was likewise not impossible that malignant structure developed in the ovary might be the seat of much of the intense pain under which the patient laboured. This poor woman for a long time before her death, which occurred in February last, had taken morphia and Battley's solution daily in considerable quantities:viz. a strong opiate at night, and smaller doses occasionally; and latterly, at least thrice during the day; so that her daily allowance amounted to not much less than the equivalent of half an ounce of common laudanum. In December last, finding the bowels costive, and the stomach deranged, owing, as I conceived, very much to the use of opium, I substituted the hemp. I began with cautious doses, viz. 15 or 20 drops, but soon by gradual additions attained to 3ifs for a night draught, with æther mixture, which latter she had previously taken with the opium. She took also as much as 3is of the hemp tincture repeatedly throughout the day. Under such doses she had quiet nights, undisturbed materially by pain or by cough, which latter had for some time been very troublesome at night. Her bowels were easily regulated by small doses of the dilute aloes pill at night, and she was, for her hopeless condition, in a state of comparative comfort for many weeks. At length, towards the end of February, her powers became exhausted, and her frame to the last degree extenuated, and she gradually sank, and died on the 12th of March.

In this patient, the hemp seemed to have no other effect than as an anodyne and soporific—it caused no indigestion that I could detect whatever.

CASE III.

About the same time, one of my nurses, long accustomed to drachm doses of Battley's solution at night, on account of asthmatic attacks, was persuaded by me to substitute the hemp in like quantity on two or three occasions, and the effects were reported similar and equal to those previously experienced from morphia and Battley, viz. good sleep without interruption by cough, dyspnæa, &c.

CASE IV

A lady, between thirty and forty, in carrying a glass vessel carelessly, fell on the stairs, and received a wound on the inside of the right carpus about an inch in length, and penetrating through the whole thickness of the cutis: the wound was of course ragged, being made by a piece of broken glass; it was dressed with adhesive plaister, over which a wet linen compress was kept in place of a poultice; the part became soon after the accident swollen and painful, and the irritation extended upwards to the shoulder. Being unable to sleep for the pain, she took, about 4 a.m., and according to instructions I had given her, a moderate dose (about 20 drops) of the hemp tincture; soon after which she fell asleep, and rested for four hours without interruption. On this occasion, no repetition of the hemp was necessary; on a second occasion, she took hemp in like manner for a pain in her side, and with like good effect—she suffered no inconvenience whatsoever from the anodyne, on either occasion.

CASE V.

A gentleman's cook, about thirty years of age, had her rest much broken by cough, so much so, that her strength was impaired, she said, for want of rest; on examination, I found sufficient evidence of tuberculation in the right lung. In addition to alkaline and other ingredients for use by day, I ordered for this patient the hemp in half drachm doses at night. These she took repeatedly, and with excellent effect—they procured the needful repose on nearly every occasion of taking them, and in no way deranged her appetite or digestion.

CASE VI.

On the 10th of February last, I commenced the use of hemp in low doses, in the case of a rheumatic female, twenty-two years of age, admitted 14th January 1843: she had been out of place for twelve months, and had been a month ill with pain of knees and elbows more particularly, which prevented sleep, and were much complained of; she had had opiates at night, and iodide of potassium and iodide of iron during the day; her sleep being still disturbed. and her head aching, I gave her hemp. At first the new medicine had no important effect; the second night I doubled the dose, then tripled it, and she told me she passed good nights with the half drachm doses, which she took from February 15, to her discharge a few days after; she perspired under its use every night, her tongue was clean in the morning, her appetite good, and she took it regularly for about a week, when she was discharged. well.

CASE VII.

A man of thirty-seven, a labourer, admitted February 8, with emphysema and tuberculation of the lungs; had been short-winded from two to three years, had palpitation, never had hæmoptysis, breathing humeral, (viz: the shoulders rose and fell with inspiration and expiration,) coloration of

face rather dark, much resonance of lower lobes, dullness of right upper lobe. This man had repeated doses of the hemp, but from the 10th, when I began with it, to the 19th, when he was taking fl. 3ij doses every night and morning, there was no satisfactory effect; on the 19th, he reported he had a good night, with relaxed bowels in the morning. The same doses continued, produced equally good effects. He died at the end of a fortnight after admission, having had to the last relief from cough, &c., and ultimately such an euthanasia as medicine is capable of affording.

CASE VIII.

A female shoe-binder, fifty-nine years of age, admitted February 6, for rheumatic gout. She had been for years subject to the complaint. Left hand and both knees swollen and tender, little fever. bowels open, pulse rather quick. This patient had considerable relief in a few days in her hand and knees, from an effervescing solution of colchicum and tartrate of potash, which purged her moderately and stimulated the kidneys. But she had no rest at night, from pain in her extremities principally. I then ordered for her the hemp in doses gradually augmented, from a dozen drops of Squire's tincture to twice and thrice that quantity, and her reports were as follows:-13th.-Had slept very well from her first dose. 15th.—No sleep, owing I think to disturbances in the ward by a delirious patient. 17th.—Slept nearly twelve

hours. Tongue clean. Bowels open. 18th.—Similar report to the last. 20th.—Two last nights both good. Complaining now most of weakness in her limbs. After this, owing to the supply of hemp being out, she had none for two nights, when she had no rest from pain of her limbs. 27th.—Two last nights slept well after hemp draughts.

28th.—An exacerbation of rheumatism in her left hand and shoulder—pulse quick, tongue coated—I ordered antimonial mixture with hemp tincture, m xx 4tis. horis. For this I substituted, next day, March 1st, effervescing solution of tartrate of potash with 20 drops of hemp tincture every four hours: this medicine soon purged and gave relief. On the 3rd, she reported herself much better; had rested very well; her hand was better. On this plan she continued for about three weeks, when she was discharged in her usual health.

CASE IX.

A tradesman, about fifty years of age, consulted me for a chronic cough. On examination, I found unequivocal evidence of tuberculation of the right lung. His rest was disturbed by cough, so that he could not follow his trade, from weakness. I gave him a mixture of alkali, gum, diuretics and tincture of hemp (m x to xx), four times a-day—a blister also was placed between his shoulders. Speedy advantage was derived from this plan; the cough became less troublesome, the breathing easier, and

the general feeling of comfort improved, while no inconvenience of any kind was experienced in the digestive functions. This patient is still under the remedy, with uninterrupted benefit.

CASE X.

A tailor, twenty-two years of age, admitted 7th of February, with cough of some months standing, the sputa had been bloody; there was depression, with dullness, and imperfect expansion of the right subclavian region-had lost much flesh latelycough prevents sleep. This patient took small doses of opium in different forms, with little advantage, until the 12th of February, or fifth day of treatment, when I began with 20 minims of the tincture of hemp: he experienced improvement. On the 15th (eighth day), he reported a better night, with more appetite (in consequence, possibly, of more refreshing sleep); notwithstanding gr. ½ doses of tartar emetic 4tis. horis, given on account of active congestion or pneumonia of the right lung. I ordered a mixture of tragacanth, liquor potassæ, and tincture of hemp (m x), 4tis. horis—this was continued, with 3ss of the tincture, at bed-time, till his death.

March 6th.—Up to the last moment he experienced relief from the hemp—viz., sleep at night, and quiet from cough by day, without any derangement of stomach, &c.

CASE XI.

A female, twenty-four years of age, admitted March 2nd, for chronic cough—she had been unwell for two or three months, but never was strong; she had had cough since childhood, when she had hooping-cough; her cheeks were flushed-pulse about 120-tongue coated as if covered with rhubarb—bowels habitually confined—slept ill from pain of side and cough; her left lung was generally dull and inexpansible, and without normal penetration by air in breathing; she complained much of pain in the left side in breathing, coughing, &c.; her sputa had traces of blood. There was no amendment on the third day, and she wanted to go home. I then changed her medicine for effervescing solution of tartrate of potash (3fs) and tincture of hemp (m x), 4tis. horis. Next visit—the fourth day of treatment—things seemed much altered for the better: the medicine had acted on the bowels. She had an excellent night, and expressed herself as feeling much better. Tongue cleaning-pain of side much relieved—want of resonance, penetration, and expansion in the left lung not materially altered -the active congestion was abated, but consolidation continued, and her amendment was in time and kind such as could happen only in a nervous subject of tuberculated lung, upon which congestion had incidentally supervened, and was again receding. leaving the lung, in point of density and degeneration, in nearly the same condition as before its accession. This patient was discharged in comfortable health on the eighth day.

CASE XII.

A lady, past fifty, generally in pretty good health, took some medicine of an aperient nature, on account of indigestion. Owing to some error as to quantity, or to some unusual susceptibility at the moment, the medicine acted violently, causing much pain and discomfort. For this she, of her own accord, took a dose of Squire's tincture of hemp, equivalent to about a grain of the extract; very soon after taking the medicine she experienced relief, passed the evening without further inconvenience, and had a particularly good night, not followed by indigestion, headache, or other unpleasant effect next day. Soon after, the same lady was attacked with influenza and swelling of the face, when she had again recourse to the hemp tincture—15 minims of which gave her uninterrupted rest for seven or eight hours. This lady has not for many years been able to use opium in any form, on account of racking headache and other distressing effects invariably produced by it, even in very small doses. She experienced no inconvenience from the hemp on either occasion.

CASE XIII.

A medical practitioner, long in the habit of using

morphia daily, to check cough and secure sleep, was persuaded by me to give the hemp a trial. This he did the more readily because he often suffered from headache, heaviness, &c., about the head, want of appetite, irregular bowels with frequently white clay-like stools, which he suspected might be owing to the morphia. This gentleman has for some weeks used the hemp in tincture through the day, mixed with water, with which it makes a sufficiently agreeable emulsion; and in pill at night, in doses perhaps double in quantity compared with the opiates he had previously employed: and he experiences the same relief from cough, and sleeplessness, as from morphia, and without drawback in the shape of headache, indigestion, &c.

CASE XIV.

A woman of thirty-five, a sempstress, was admitted on January 13th, for rheumatism. She had been subject to rheumatic attacks for years. When admitted, she had swelling and tenderness of one ancle and both knees: she had no fever, and was pale and feeble. Guiacum mixture and iodide of iron were successively given her; then effervescing solution of the tartrate of potash and warm baths, but no benefit resulted, and she especially complained of sleeplessness from pain in her limbs. On the 8th of February, I began with hemp in low doses, and gradually raised them to half a drachm. From the first there was apparent effect, and on the 12th she

reported a very good night's rest, after xxv minims of the tincture.

15th.—Bad night, owing, apparently, to no hemp having been given, on account of the small stock I had procured for trial being exhausted. After this she took the hemp regularly at night, as far, at length, as xlv minims, and usually with satisfactory effect as to her night's rest, and without subsequent inconvenience. On the 21st and 22nd, however, she had no hemp, and, in consequence of the omission, I conceive, had no rest either night. She was discharged on the 26th, because she would not submit to the magnetic-electric current, ordered for daily use in her case, as a discutient and lecal tonic.

CASE XV.

I have given more than one case in which troublesome cough was checked by the hemp. The following is another form of cough usually very unmanageable by antispasmodics, in which, so far tried, the new remedy promises good effects.

An infant nine weeks old was admitted for hooping cough, which had but just shown itself. I began at once with hemp tincture mii in tragacanth mixture, 4tis. horis. On the 27th February, fourth day of treatment, I ordered the same medicine, 3tiis. horis. On the 28th, the cough was still rather frequent and violent, and the nights consequently bad; he vomited less however, and but once after cough-

ing, which shows that the violence, if not the frequency of the cough was somewhat abated.

March 3.—Cough reported still bad at night, viz. fits occurred repeatedly and often enough to prevent proper sleep. I increased the dose to iij minims 3tiis. horis. On the 6th reported to have been wakened but twice in the night by the cough; to have had but two fits of coughing the previous day, and but one to-day. Finding the medicine agree well, I increased the dose iv minims 3tiis horis.

15th.—Reported much improved within a few days; coughs but once with hoop in twenty-four hours; the mother says that she gives the medicine on the whole regularly; but oftener at night because the cough is then more frequent. The child looks well, and will probably very soon be discharged perfectly well.

Fever Cases.

In the course of the week commencing Feb. 24, I received into my wards half-a-dozen or more cases of spotted synochus and typhus of an asthenic character, with feeble often-jerking pulse, dry tongue, copious appearance of spots and stigmata, especially about the body; low delirium, and, in nearly all the cases, tremulousness of the tongue and limbs, amounting in several to subsultus and jactitation. They were cases in which little was indicated in the way of active medication. Quietude, ventilation, dilution, and gentle action on the abdominal functions, with

cold to the head, were the means first to be thought of: and afterwards moderate stimulation was likely to become necessary. The former views were met by the effervescing draught every four hours; by shaving the head and applying cold lotions, &c.: and the latter by wine in moderate quantity where it was deemed necessary. The fever was a low nervous one, pathologically allied to a common form of delirium tremens, and analogy suggested the use of some narcotic more efficient in conciliating sleep than any of the vinous kind. It appeared to me that opium was inadmissible. On the one hand the secretions were much deranged already, while the mischief from disturbed nights appeared by no means sufficiently pressing to warrant the use of so equivocal an agent, except in combination with mercurv, aloes, or other corrective of disordered abdominal secretions. Now, the cases before me exhibited the usual tendency to diarrhœa, so that I considered it inexpedient to use any thing by which active purging might be excited. Under those circumstances I thought that I might give the hemp a trial.

CASE XVI.

The symptoms of fever were in all so much alike, and the asthenic character in all so distinct, that it is not necessary or expedient that I should give details of each case by itself. I shall, therefore, sketch separately the first case in which the hemp was used by me, and then advert generally to the others.

Feb. 24th.—In the evening a man was admitted twenty-two years of age, and about ten days ill with feverish symptoms. I saw him on the next day, and found that since his admission, spots had appeared, such as occur so often in the low fever of London; his tongue and hands were tremulous; he had had no delirium, but yet spoke of being lightheaded; the pulse was about 120, rather jerking; bowels open; tongue, a creamy thick coating. I ordered the effervescing draught 4tis. horis.

Feb. 26th.—Bowels reported rather loose; much delirium in the night; pulse as before; much thirst; ordered, affusio frigida (cold dash or current) capiti ter quotidie, and superseded the effervescing saline, as too aperient, by the mixture of acetate of ammonia.

27th.—Bad night again; delirium wilder than before; and more subsultus tend. Ordered *Træ Cannabis Ind.* 3fs. h. s.

28th.—Says he "slept none at all last night;" but that he "has slept this morning;" "has no headache at all;" he is more sensible than he was. Tongue moist; brown in centre; "feels himself a little better;" nurse says he slept much more than before taking the hemp. Ordered Træ Cannabis Ind. fl. Dij spir. ammon. arom. 3fs. h. s. also a blister between the shoulders.

March 1.—Slept two hours after the hemp, and again a couple of hours this morning; pulse 120, soft, good size; tongue moist and much less brown; less thirst; bowels open; looks improved; ordered hemp and ammonia as before.

March 2.—" Thinks he slept pretty fair;" nurse says he slept well; bowels open; tongue moist, with creamy sides and brownish centre; pulse 120, steady, not bounding, soft and of good size; "no pain whatever;" had a little quiet delirium during the night, without outcry of any kind or vociferation; two stools in the night.

March 3rd.—Good night; pulse 80 to 90; tongue dry, stiff and dark; no pain; bowels open; less thirst.

5th.—Tongue nearly clean; "slept very well indeed." This patient is now on full diet, and on the point of leaving the house.

CASE XVII.

A second case of the same fever treated with a cold dash and effervescent salines during the day, and hemp at night, was that of a lad of 18, admitted February 27th, and to be discharged well to-morrow. This patient's symptoms, remedies and medicinal effects were precisely the same as those of the last case (16), so that I shall give no particulars regarding it.

CASE XVIII.

This was a case of a man admitted Feb. 24, and in the main agreeing with the other two; but differing in the age of the subject (52 years) and the absence of delirium. All other symptoms, whether having reference to the brain and nerves, or skin,

or abdominal viscera, were the same as in the others. The tremors were obvious in this man at my first visit. He was treated with effervescent salines and composing draughts of hemp, with cold stream to the head, and the same results were obtained as in the other cases; saving that, owing to his age, no doubt, he required more wine, and recovered more slowly, though originally less dangerously ill than either of the preceding. He is now convalescent.

Of some other cases of this fever, two died from complications; the one in the brain and the other in the thorax. The man (Case 18) required, for about a week after March 2, a few ounces of wine daily, none of which had been required by the other Cases (16 & 17), on account of fever, though one had a little after, to hasten convalescence.

Observations.—The objects I have had in view in the trials of the hemp above detailed (which, I may mention, are but a third or fourth part of the whole number of cases in which I have experienced beneficial effects from the new remedy) are these:—

- 1. To determine as nearly as I could, the question, whether the hemp narcotic be in reality possessed of medicinal properties sufficiently energetic and uniform to entitle the drug to admission into our pharmacopæia; and,
- 2. To determine how far the extract could be used with advantage as a substitute for opium in various important diseases, acute and chronic.

In answer to the former question, I have no hesitation in affirming that in my hands its exhibition has usually, and with remarkably few substantial exceptions, been followed by manifest effects as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; and as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits; and that these effects have been observed in both acute and chronic affections, in young and old, male and female.

In reply to the latter question, I should say that these useful, and in several cases most salutary effects have been obtained without any important drawback or deduction on account of indirect or incidental inconveniences. Thus, I have hitherto experienced no difficulty in keeping subjects of pulmonary disease under the constant operation of a narcotic, which repressed to a most important extent their mischievous cough, and secured them refreshing rest, without causing in the least degree anorexia or indigestion, or, with one or two doubtful exceptions, any inconvenient result or sensation whatever. Thus, again, I have repeatedly had a subject of articular rheumatism or severe bronchitis under the double influence at once of a diuretic-laxative medication and of an anodyne-antispasmodic; the saline solution, with or without colchicum, correcting the blood and secretions unimpeded by the narcotic, whose whole influence appeared to be expended on the tissues, seats of pain and irritation. For a third example I may

refer to the use of the hemp in low fever, in securing the enjoyment of that great restorative in acute disease—viz. tranquil sleep; and producing this benefit without any neutralizing inconvenience, without causing constipation, nausea, or other effect or sign of indigestion, without headache or stupor.

The only class of cases in which I have found the hemp not to act as a competent substitute for opium, is in the intestinal fluxes, such as the diarrhæas of phthisis and of low fever in advanced stages, of old ulcerations of the bowels, &c., and in dysenteric affections. In such cases, opium is the great controlling remedy of the narcotic class, and admits of no deputy. And in such cases, happily, opium produces in judicious hands none of its inconvenient effects, and may usually be safely and freely employed.